Climatological Data for May, 1910.

DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

The beginning of the month of May was marked by unusually cool weather in the Great Valley of California and along the coast north of the Tehachapi. The cool spell soon came to an end, and the month as a whole was one of unusual warmth. Near the close of the month there was a warm spell with afternoon temperatures above 90° on the coast, and ranging from 100° to 120° in the interior. Memorial Day was the hottest day of the year. At San Francisco the maximum temperature was 90°, making the day the warmest in May since 1896. It is worth noting that on this same date a temperature of 120° was recorded at Yuma, which, it is thought, breaks the record for high temperatures. At 3 stations in California reliable records of 121° F. were obtained on May 30. Throughout the Great Valley and also in the southern counties very high temperatures were recorded.

Reports from other sections, particularly from the central portion of the country, will doubtless show a cool May, as the excessive heat noted on the Pacific Slope does not appear to have extended east of the Rocky Mountains. In some respects May throughout California was more like the average midsummer month. Owing to almost ideal distribution of rainfall with regard to frequency during the winter and early spring months, the hills remained green until near the end of May, notwithstanding the comparative absence of rain and the general dryness of later months.

The snow cover in the mountains, which was none too heavy at the beginning of the month, steadily decreased in depth, and the rate of melting may be taken as a fair average because there were few disturbing factors. The station at Summit reported 13 inches of snow on the ground at the beginning of the month and 3 inches at the close. During the first 10 days of the month the rate of melting was exceedingly slow and practically no decrease occurred. The snow cover disappeared, in the 6,000-foot level, at the rate of 10 inches during the last 2 decades of May, or about half an inch a day.

The precipitation was less throughout the entire State than during any May since 1903, when state averages began to be recorded. The average precipitation for California during May, based upon records of over 150 stations, was as follows: 1903, 0.14 inch; 1904, 0.22 inch; 1905, 2.18 inches; 1906, 3.19 inches; 1907, 0.57 inch; 1908, 1.63 inch; 1909, 0.23 inch; 1910, 0.18 inch.

The month was, therefore, unusually dry. An interesting record of rainfall at San Francisco, covering a period of 61 years, shows that there have been but 6 Mays during this period in which the precipitation at that place was less than during the present month.

TEMPERATURE.

The mean temperature for the State was far above the normal. The mean values for California in recent years are as follows: 1903, 63.5°; 1904, 64.9°; 1905, 59.6°; 1906, 59.8°; 1907, 61.5°; 1908, 58.0°; 1909, 60.4°; 1910, 65.5°.

Compared with recent previous years the present May breaks the record. It will be noted that it was fully 5° warmer than the same month last year, which, while dry like the present May, was a cool month. It is not easy to explain why these 2 dry months should exhibit such a difference in temperature. It may, however, be of some interest to note that there was a great difference in the depth of the snow cover in the 2 months. The extent and depth of the cover were greater during the cool month. One other relation is significant. There was an excess of wind during May, 1909. During the present May the prevailing northwest summer winds were neither high nor prolonged. One fact which lends weight to the belief that there is some general relation between the excessive heat of the present May and the absence of strong winds is that the coldest May recorded since 1903 was that of 1908, which was the windiest May on record.

The mean temperature was 65.5°, or 3.2° above the normal. At many stations the monthly mean temperature was 6° or more above the normal. On May 30 high temperatures were reported at nearly all points. At Blythe, Heber, and Indio, 121° was recorded. Temperatures ranging from 110° upward were quite general near the close of the month, both in the Great Valley and in the Salton Desert. The lowest temperature recorded was 6° on May 5 at Tamarack, elevation, 8,000 feet. Elsewhere is published a note describing an ascent of Mount Whitney on May 23, when a minimum temperature of −23° F., representing the lowest temperature of the whole winter, was noted. At 7 a. m. of the date mentioned the temperature was 22°.

From an agricultural standpoint temperatures throughout the State were favorable, except during the middle of the month and at the end.

It is reported that on certain spots in the delta lands there were some frosts which damaged beans slightly.

PRECIPITATION.

The greatest 24-hour rainfall was 1.10 inch at Inskip. The greatest monthly amount was at Monumental, 3.19 inches. More than half the stations reported no rain during the month. From an agricultural standpoint the absence of rain was not beneficial. While some slight damage to hay and cherries generally results from heavy May rains, still the ultimate good resulting from the water supply at this time is generally recognized. May rains, as a rule, mean heavy yields of fruit and grain.

SNOWFALL.

Not in many years has the snow cover been so restricted. Owing to the comparatively light fall during the previous month the depth of snow on the ground was less at the close of the month than for many years. The season, so far as travel in the mountains is concerned, is an open one, and pack trains will probably find no difficulty in getting through the high passes of the Sierra early in June. At the close of May snow was practically gone at elevations below 5,000 feet.

The outlook is not favorable for an ample supply of water during the long summer.

EARTHQUAKES.

On May 6, at 8:46 a. m., a light earthquake shock was felt at Bakersfield, also at Fresno and points in the San Joaquin Valley. On May 13 light shocks were felt in southern California, especially in the San Bernardino Valley, at 10:20 p. m., and a shock was reported also at Needles at 10:35 p. m. On May 15, about 8 a. m., light shocks were felt at San Diego and Los Angeles.

The following note from the official in charge at Los Angeles describes the shocks of May 12 and 15:

The shock on the 12th was light and occurred at 10:22 p. m. The motion was apparently from north to south and was sufficient to stop clocks in the downtown office buildings and at some places in the residential section of the city. That of the 15th was more marked and consisted of 2 shocks, one at 7:47 a. m. and the other at 7:47:45 a. m. Both vibrations were from north to south. The latter shock was sufficient to rattle windows and crockery and to stop clocks. No damage resulted.

NOTES ON RIVER CONDITIONS IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS DURING MAY, 1910.

Sacramento watershed.—All streams in the Sacramento drainage basin were lower than for many years previous during the corresponding month. This was particularly so of the Sacramento River itself, which, at many points, was much lower than for any May of which there is authentic record.

At Red Bluff the average gage reading, 3.1 feet, is 0.5 foot lower than that of May, 1908, when the Sacramento and tributaries were unusually low. At Colusa and Knights Landing the river averaged 2 feet and 0.7 foot, respectively, below the May stage of 1908. At Sacramento City the average stage, 16.4 feet, was 0.2 foot above that of May, 1908, but with this exception, it was over 2 feet lower than for any May during the past ten years.

The Yuba River at Marysville maintained a fairly good stage of water from the 1st to the 14th, inclusive; after this period, however, the river receded rapidly, and at the close of the month was over 1 foot lower than on the 14th, and the monthly average was over 2 feet lower than for May, 1908.

The Feather River at Oroville was uniformly low during the entire month with an average of over 1 foot below the low water of May, 1908. The range of this stream, between the highest stage on the 1st and the lowest on the 31st, was only 2.6 feet, indicating that the water reserve in the mountains has become exhausted from 20 to 30 days earlier than usual.

While the American River carried considerably less water than is usual during the late spring, this stream kept up reasonably well until the beginning of the last decade, when it began receding, and there was a steady fall up to the end of the month. The American as a whole was much below the May normal.

It is now evident that not only will there be a marked shortage of water during the coming summer throughout the Sacramento watershed, but it is not unlikely that navigation in the Sacramento River, beyond the tide limits, will either be seriously retarded or else suspended before the beginning of the next wet season.

San Joaquin watershed.—At the beginning of May all streams in this watershed were considerably above the usual spring stage, and reasonably high stages obtained until the middle of the month; afterwards there was a steady decline. The San Joaquin itself, from the mouth of the Tuolumne to the lower islands, continued above the May normal during the entire month.

General conditions now indicate that there will be an absence of the usual June rises in the San Joaquin and tributaries, and that the extreme low water, that usually culminates during the last of August, will occur this season from 20 to 30 days earlier.

The rainfall throughout the entire central valleys of the State was markedly deficient.—*N. R. Taylor, Local Forecaster.*

A MAY ASCENT OF MOUNT WHITNEY, CAL.

It may be recalled that last summer the Weather Bureau sent a representative to the summit of Mount Whitney, with the Campbell–Abbot party, representing the Lick Observatory and the Smithsonian Institution. A small building has now been erected by the Smithsonian. Before leaving the summit Professor McAdie and Mr. G. F. Marsh made a temporary shelter, fastening the same to the north wall of the observatory building, about 5 feet above the ground. Maximum and minimum thermometers were placed in proper position. On May 24, 1910, the following telegram was received from Mr. G. F. Marsh, cooperative observer at Lone Pine:

> Just returned from Mount Whitney; found everything all right; minimum twenty-three degrees below zero, maximum fifty-five. At seven this morning minimum twenty-two above. First snow ten thousand feet. Little snow up to twelve to thirteen thousand. Snow about same as first July last year. Little snow above thirteen thousand. Made trip alone.

Mr. Marsh's feat was quite an achievement and it was very gratifying to learn that the instruments had successfully withstood the winter's storms. The temperature −23° F., probably fairly represents the lowest temperature of the winter at the highest point in the United States proper. Lower temperatures were recorded at lower elevations; for example, −30° F. at Alturas, Cal., on January 3, 1909, elevation 4,460 feet; and −29° F. at Tamarack, Cal., elevation 8,000 feet, on January 5, 1909. The result confirms our previous experiment made in the winter of 1898, when a minimum thermometer was exposed in a rough shelter a few feet above the ground, near the summit of Mount Lyell, elevation 13,217 feet. The lowest temperature recorded by the thermometer when found the next summer was −17° F. During the same period temperatures as low as −30° F. were recorded at Bodie, Cal., elevation 8,248 feet.

Prof. J. E. Church, jr., so well known in connection with the work at Mount Rose, states that the minimum temperature at that point during the winter was probably on February 1, the instruments reading as follows: Exposed, −7.5° F.; minimum, reset, −8° F.; thermograph, −5° F. Unfortunately the summit was not visited between December 16, 1909, and February 1, 1910. The minimum for January 5 can not therefore be given. The minimum thermometer for this period registered −28° F., almost the same as on Mount Whitney; but the real minimum he thinks is represented by the figure given above. Professor Church holds the opinion that the index had been shaken down about 20° by wind action.

PUMPED IRRIGATION.

The following abstract of a paper read at the Pacific Coast meeting of the American Institute of Electrical Engineers, May 6, 1910, on "Hydroelectric Power as Applied to Irrigation," by John Coffee Hayes, shows in part the work done in California in developing agriculture by pumped irrigation.

The paper covers a wide range and goes into many details concerning the construction of various power plants in California, showing also the way in which the water is diverted.

The reader who cares for a further knowledge of the paper is referred to the Journal of Electricity, Power, and Gas, Vol. 24, No. 23, June 4, 1910.

Among the many uses to which hydroelectric power is being applied, that of electrically pumped water for irrigation is being advocated at present in a great many instances; and while the mere pumping of the water is so simple as to be hardly worthy of discussion, it may be of interest to point out some of the operating conditions encountered in a project formed chiefly for this purpose.

A hydroelectric system to supply power for pumping water for irrigation will usually be required to build up its own market in the territory served, and it is manifestly necessary at the outset to carefully study the territory. Usually some pioneer work by progressive farmers will show what the land is capable of producing; but the greater part of the territory will consist of barren country planted to grain, or used for grazing purposes, with here and there a town. This land is in large holdings, and the first thing to be determined is the amount of subdivision which may be expected, and whether the proper men are in the field to bring this subdivision about. The character of the land is, of course, of primary importance, and the percentage of good land should be carefully determined. Irrigated land should have a slight slope for distributing the water and must be reasonably smooth. Hard pan near the surface must be carefully guarded against, as it generally denotes a rather poor quality of soil. The adaptability of the soil for different products and the climate should be considered, yet data on these two points are hard to get and are usually unreliable. Tests and analysis of the soil would seem to be the natural way of determining its adaptability to the different products, but the agriculturist pays very little attention to these analyses and has apparently a good reason for this, as they are often unreliable.

In the San Joaquin and Sacramento valleys it has been demonstrated that almost any kind of products may be raised on the good lands. Only a small portion of this land has been planted to citrus fruits, but small groves may be found along the entire length of the valley, and it would therefore seem as though it were all adapted to this class of products if water is applied. The best conditions seem to exist, however, where the mountains rise abruptly from the valley and the level flat land extends up to the foothills, for where a long stretch of rolling country lies between the plains and the hills, hard pan and bedrocks are generally very much in evidence.

Due to the fact that the oranges in the San Joaquin Valley ripen and are marketed a full month earlier than those in the southern part of the State,

they bring exceedingly good prices and the growth of this industry has been very rapid. The present citrus districts, as in fact is most of the land in the citrus belt, are above the existing irrigating canals, which in most instances divert all of the water available from the rivers, and are therefore entirely dependent on ground waters for irrigation; and, as the profits from this crop warrant a large expenditure, it is naturally the best market for power for pumping purposes. Aside from citrus fruits, all kinds of high class products, such as deciduous fruits, berries, vegetables, nuts, vines, and alfalfa, are to some extent also irrigated by pumped ground water.

The amount of water required for the irrigation of different products varies to such an extent in the different communities that it is impossible to get any figures which would be at all accurate. The character of the soil is accountable for the difference to a large extent, but the cost of water and the personal equation are accountable to a much larger extent. There is usually a marked tendency to the overuse of water. The duty of irrigation water in California is believed to average about 2 feet in depth in addition to the average rainfall.

In the Imperial Valley, in 1906, 120,000 acres were irrigated and a total average depth of 2.04 feet was used, the main crop being grain. In San Diego County on land planted to citrus fruits an average depth of 1.5 foot was used from 1889 to 1899. Around Los Angeles it is estimated that an average depth of 2.4 feet is used.

In the Modesto and Turlock districts as much as 8 feet to 10 feet in depth was used at the start; but in 1908 the depth varied from 1.2 foot to 3.6 feet. In the Fresno district very little water is applied to the surface of the land at present, the land being subirrigated by seepage from the canals.

The San Joaquin and Sacramento valleys are favorable storage basins for ground waters, as the only outlet is the San Francisco Bay through the narrow straits of Carquinez. The elevation of the Lindsay district, 250 miles away, is about 300 feet, and the ground waters must, therefore, of necessity travel very slowly and be in large quantities.

In determining the policies and the scope of a proposed hydroelectric system for the supply of power for pumped irrigation, it is necessary to determine at the outset the exact territory to be served and the general policies to be followed as regards charges, contracts, extensions, etc., or, in other words, a definite goal must be set, the power company must do everything possible to assist development, and any inhabitant in any section of the territory must be supplied with power whenever it is required. Therefore, the power system simply grows up with the country, and while this growth is taking place (it of necessity must take many years) it must be considered that the power system is in course of construction during the entire period. This is the main feature in which the power project depending entirely upon an irrigation market differs from the project supplying ordinary commercial business in an already well-settled community, and this is a difference which is seldom fully understood and the time element not fully provided for.

SPIDERS AND ANTICYCLONIC WINDS.

By FORD A. CARPENTER, Local Forecaster.

An article on "Bird-Flight and Air-Navigation" in the current number of Century Magazine[1] states that "It was found by a rigid comparison of the birds' movements with the weather map that their flights were invariably started by winds emanating from cyclonic or anticyclonic winds." It has been observed in this locality that spiders also utilize the anticyclonic winds. Whenever the weather map shows a high area over the northwest, the spreading of this area over Washington and Oregon starts the northerly or northeasterly winds flowing down to the so-called permanent low area in southern California, when a close observer may see flying spider webs.

Certain species throw out their thin gossamer silk and, buoyed in the air, are wafted considerable distances. Almost the first indication of the northerly or northeasterly winds (which are popularly termed "desert winds") is the quantity of tiny lengths of spider silk that float in the air. Until the advent of the glass screen to the automobile, these flying webs were annoying to the automobilists, causing irritation to the eyes. The spiders' silky streamers may be seen on the trolley and telephone wires in the early morning of a dry day.

HYDROGRAPHIC DATA OF THE SACRAMENTO RIVER.

Compiled from the records of the United States Geological Survey by W. B. CLAPP, District Engineer.

The Sacramento River is the largest and most important river in California. It drains an area of approximately 27,100 square miles in the north-central part of the State. The boundaries of its drainage basin are determined by the Sierra Nevada and Warner Mountains on the east, Mount Shasta on the north, and the Trinity Mountains and Coast Range on the west. Its length is about 230 miles north and south, with a width of about 150 miles east and west.

The Sacramento River has its source near the south boundary of Siskiyou County, near the town of Sisson, in springs issuing from the western slope of Mount Shasta. It flows southerly for a distance of about 370 miles, finally discharging into Suisun Bay, near Collinsville, about 50 miles by water from San Francisco. The Sacramento, above the mouth of the Pit River, has a length of only about 50 miles and is a comparatively small stream, but its course is through an exceptionally beautiful canyon, its flow being continually increased by water discharging from numerous large springs, among which are the famous Shasta Springs. Below the mouth of the Pit River the Sacramento is a stream of considerable magnitude and is navigable as far north as Red Bluff, about 250 miles from its mouth and 300 miles from San Francisco.

The most important tributaries of the Sacramento River are from the east, and they drain the western slope of the Sierra Nevada. The Pit River is the most important affluent, considering its drainage area and minimum flow. In fact, Pit River is the main stream and the Sacramento River, above its junction with the Pit, is a comparatively small tributary. The principal affluents of the Sacramento below Pit River, in order from north to south, are Cow, Battle, Antelope, Mill, Deer, Chico, and Butte creeks, Feather, Yuba, Bear, and American rivers from the east, and Clear, Cottonwood, Thomes, Stony, Cache, and Puta creeks from the west. Approximately 84 per cent of the Sacramento Basin is mountainous, with many high peaks and ranges and numerous small upland meadow valleys. The other 16 per cent, comprising the gently sloping areas along the lower reaches of the Sacramento River, constitutes what is known as the Sacramento Valley.

The mean annual precipitation in the basin varies with the altitude. It is least on the floor of the valley, where it averages 22 inches, but it increases rapidly in the higher mountain areas, until at elevations of from 3,000 to 5,000 feet occasional annual falls of over 100 inches occur. In the extreme northeastern part of the basin the annual precipitation is comparatively light, even on the higher elevations. The greater part of the annual rainfall comes in the winter months, particularly in December and January, when about 18 and 20 per cent, respectively, of the mean annual rainfall is received. February and March each bring about 13 per cent and November 12 per cent, so that about 76 per cent of the mean annual rainfall occurs in the period November to March, inclusive. April, May, and October furnish 20 per cent more, leaving the other 4 months practically rainless. The precipitation appears chiefly as snow at the higher altitudes. Ordinarily the snow melts slowly, not wholly disappearing until late summer, thus equalizing and extending the stream flow. At times the snow line extends to the lower elevations near the rim of the valley, which, being followed by rising temperature and heavy rains, produces floods of greater or less severity.

The Sacramento Valley probably furnishes the greatest field for development in the United States. The possibilities for irrigation are extensive. Considerable irrigation development has been carried on and the advantages for further irrigation are attracting the attention of capital throughout the United States. Many excellent storage reservoir sites exist in different parts of the Sacramento Basin. The water supply is plentiful, if properly controlled for distribution. The valley suffers from frequent floods which occur in winter and early spring, the worst of recent years occurring in 1904, 1907, and 1909. The total area of the Sacramento Valley is about 4,250 square miles, about 40 per cent of which suffers from floods by overflow.

[1] MacMechen and Dienstbach. "Bird flights and air navigation." Century, Vol. LXXX, p. 297.

TABLE 1.—*Climatological data for May, 1910. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.					Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Oregon.																				
Klamath Agency	Klamath	4,169	2	50.8	.....	86	31	22	11†	52	.....	.....	.....	.....	.....	.....	.....	.....	sw.	H. J. Wilson.
Klamath Falls	...do	4,250	15	54.2	+ 1.1	90	30†	20	16	48	0.97	− 0.16	0.45	0.0	7	18	5	8	nw.	W. H. Heileman.
Lakeview	Lake	4,800	7	50.6	− 0.7	85	31	20	12†	52	0.10	− 1.48	0.10	0.0	1	20	3	8	s.	Geo. L. Wharton, jr.
Merrill	Klamath	4,070	4	54.6	.....	93	30†	30	5†	51	0.07	.....	0.06	0.0	2	24	3	4	.....	D. H. Ward.
Yonna	...do	.....	3	52.4[a]	.....	93[a]	29	24[a]	17	60[a]	0.68[a]	.....	0.38[a]	0.0[a]	4[a]	15[a]	12[a]	3[a]	s.	Jacob Rueck.
California.																				
Alameda	Alameda	.....	1	63.5	.....	96	30	46	6†	...	T.	.....	T.	0.0	0	16	3	12	w.	Chas. E. Sears.
Alturas	Modoc	4,460	6	55.4	.....	98	30†	25	17	61	0.63	.....	0.18	0.0	7	20	8	3	sw.	Prof. C. B. Towle.
Anderson (near)	Shasta	550	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. S. Richardson.
Angiola	Tulare	208	10	67.4	+ 0.3	112	29	42	19†	63	0.00	− 0.48	0.00	0.0	0	31	0	0	nw.	Santa Fe Co.
Antioch	Contra Costa	46	31	69.6	+ 3.5	104	30	52	4	....	0.00	− 0.49	0.00	0.0	0	24	4	3	nw.	Southern Pacific Co.
Aptos	Santa Cruz	102	25	62.1	+ 3.3	82	29	50	5	....	0.00	− 1.02	0.00	0.0	0	17	10	4	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	1	65.8	.....	107	31	40	4†	49	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	G. I. Royce.
Auburn	Placer	1,360	39	66.8	+ 4.1	102	31	36	4	42	0.12	− 1.44	0.12	0.0	1	23	0	8	se.	Southern Pacific Co.
Avalon	Los Angeles	.....	.....	61.0	.....	84	10	48	6	25	0.00	.....	0.00	0.0	0	23	7	1	w.	W. N. Vilas.
Azusa	...do	540	8	68.1	.....	104	29†	38	4	52	0.00	− 1.02	0.00	0.0	0	25	4	2	sw.	A. P. Griffith.
Bagdad	San Bernardino	784	7	89.4	.....	117	31	57	5	33	0.00	.....	0.00	0.0	0	...	.....	.....	.....	Santa Fe Co.
Bakersfield	Kern	404	21	74.6	+ 1.7	110	31	51	4†	37	0.00	− 0.18	0.00	0.0	0	31	0	0	.....	Do.
Barstow	San Bernardino	2,105	7	73.4	.....	111	30†	35	5	49	0.00	.....	0.00	0.0	0	31	0	0	w.	E. L. White.
Berkeley	Alameda	317	23	60.8	+ 3.5	89	15	44	5	35	0.01	− 1.20	0.01	0.0	1	14	7	10	w.	State University
Biggs	Butte	98	11	68.3	+ 2.3	105	30	49	4	....	0.30	− 0.76	0.30	0.0	1	25	3	3	s.	Southern Pacific Co.
Bishop	Inyo	4,450	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Chalfant.
Blocksburg	Humboldt	1,700	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Victor Hope.
Blue Canyon	Placer	4,695	11	55.7	+ 2.8	90	30	27	3	34	0.60	− 3.15	0.40	0.0	2	28	1	2	.....	Southern Pacific Co.
Blythe	Riverside	.....	1	78.0[b]	.....	121[b]	30	43[b]	5	55[b]	0.00	.....	0.00	0.0	0	23	8	0	sw.	H. V. Blenkiron.
Branscomb	Mendocino	2,000	10	58.2	.....	97	30	31	4†	47	0.76	− 1.85	0.50	0.0	3	18	7	6	n.	A. J. Haun.
Brawley	Imperial	− 105	1	81.6[f]	.....	118[f]	30	51[f]	6	45[f]	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Brush Creek	Butte	2,140	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cal. Gas & Electric Co
Calexico	Imperial	0	5	81.4	.....	116	30	54	4	41	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	J. E. Peck.
Caliente	Kern	1,290	34	75.3	+ 5.3	103	30†	56	2	....	0.00	− 0.63	0.00	0.0	0	31	0	0	.....	Southern Pacific Co.
Calistoga	Napa	363	38	67.0	+ 5.5	101	31	40	1†	....	0.15	− 0.99	0.15	0.0	1	24	0	7	w.	Do.
Campbell	Santa Clara	217	13	60.0	+ 2.4	100	30	36	4†	50	0.00	− 0.56	0.00	0.0	0	15	4	12	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	3	66.2	.....	110	30	36	1†	50	0.80	.....	0.33	0.0	3	26	1	4	.....	S. B. Johnson.
Cedarville	Modoc	4,675	16	60.7	+ 8.8	98	31	31	5	43	0.27	− 1.33	0.18	0.0	3	27	4	0	sw.	T. H. Johnstone.
Chico	Butte	189	40	68.8	+ 0.4	104	30	33	4	47	0.06	− 0.90	0.06	0.0	1	25	2	4	s.	Butte County R. R. Co.
China Flat	Humboldt	600	1	68.2	.....	106	31	39	16	58	0.55	.....	0.39	0.0	2	22	7	2	nw.	O. I. Westerburg.
Chino	San Bernardino	714	18	70.2	+ 5.5	102	30	55	3†	....	0.00	− 0.33	0.00	0.0	0	19	9	3	sw.	Southern Pacific Co.
Cisco	Placer	5,939	39	.....	.....	.....	.....	.....	.....	.....	0.30	− 2.15	0.20	3.0	2	29	0	2	.....	Do.
Claremont	Los Angeles	1,200	18	66.1	+ 5.4	101	31	39	4†	44	0.00	− 1.00	0.00	0.0	0	26	4	1	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	66.0	.....	107	30	37	5	52	0.21	.....	0.21	0.0	1	21	9	1	n.	Lloyd Browne.
Colfax	Placer	2,421	39	61.2	0.0	98	31	33	5	41	0.55	− 1.84	0.35	0.0	2	24	1	6	s.	Southern Pacific Co.
Colusa	Colusa	60	7	72.0	.....	101	29†	48	4	34	0.06	− 0.55	0.06	0.0	1	.....	.....	.....	.....	W. K. De Jarnatt.
Corning	Tehama	277	24	76.4	+ 8.2	102	30†	60	1†	....	0.00	− 0.93	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
Cuyamaca (1)	San Diego	4,677	11	62.2	+12.7	96	31	35	4	35	0.00	− 1.84	0.00	0.0	0	12	12	7	w.	L. L. Macquarie.
Daunt	Tulare	4,000	3	61.4	.....	100	31	25	3	48	0.00	.....	0.00	0.0	0	19	10	2	.....	D. L. Wishon.
Davisville	Yolo	51	38	65.1	+ 2.8	108	30	34	4†	54	0.02	− 0.66	0.01	0.0	2	25	6	0	sw.	S. H. Beckett.
Deer Creek	Nevada	3,700	3	56.7	.....	94	30	29	4	45	0.34	.....	0.25	0.0	2	20	8	3	...	Cal. Gas & Electric Co.
Delta	Shasta	1,138	25	71.6	+ 6.8	97	30	52	8	36	0.00	− 4.01	0.00	0.0	0	27	2	2	s.	Southern Pacific Co.
Denair	Stanislaus	126	10	67.0	+ 2.7	107	31	40	1†	55	0.01	− 0.64	0.01	0.0	1	26	2	3	se.	Santa Fe Co.
Dobbins	Yuba	1,650	6	68.6	.....	102	29†	40	4	42	0.56	.....	0.32	0.0	3	25	2	4	s.	Cal. Gas & Electric Co.
Dudleys	Mariposa	3,000	1	57.4	.....	94	30†	28	5	46	0.13	.....	0.13	0.0	1	22	6	3	n.	W. H. Dudley.
Dunnigan	Yolo	65	33	79.0	+ 8.7	106	29	58	21	....	0.01	− 0.93	0.01	0.0	1	25	3	3	n.	Southern Pacific Co.
Dunsmuir	Siskiyou	2,285	21	64.4	+ 6.9	100	31	42	3	....	1.33	− 2.39	0.98	0.0	4	24	0	7	n.	Do.
Durham	Butte	160	15	67.4	+ 4.2	105	31	35	4	45	0.13	− 1.08	0.10	0.0	2	26	4	1	n.	R. W. Durham
El Cajon	San Diego	482	11	65.8	+ 3.4	98	31	38	5	45	0.00	− 0.48	0.00	0.0	0	28	0	3	sw.	H. H. Kessler.
Electra	Amador	725	6	71.0	.....	110	30†	41	5	48	0.09	.....	0.06	0.0	2	27	3	1	.....	Cal. Gas & Electric Co.
Elsinore	Riverside	1,234	15	67.4	+ 1.4	109	31	33	19	56	0.00	− 0.42	0.00	0.0	0	28	3	0	w.	W. H. Bohannon.
Emigrant Gap	Placer	5,230	36	63.6	+13.4	86	30	33	3	31	0.45	− 1.88	0.35	T.	2	25	0	6	sw.	Southern Pacific Co.
Escondido	San Diego	657	16	65.9	+ 3.3	94	28	36	5	47	0.00	− 0.70	0.00	0.0	0	6	23	2	w.	A. R. Moon.
Eureka	Humboldt	64	24	53.8	+ 1.7	74	16	43	28	28	0.64	− 2.19	0.27	0.0	7	6	10	15	n.	U. S. Weather Bureau.
Farmington	San Joaquin	111	31	63.5	− 2.6	104	31	47	20	....	0.05	− 0.86	0.03	0.0	2	25	4	2	nw.	Southern Pacific Co.
Folsom	Sacramento	252	38	69.2	● 1.5	111	30	42	5	49	0.10	− 1.13	0.08	0.0	2	24	1	6	s.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	15	48.8	.....	79	29	22	4	40	0.92	− 3.43	0.40	2.0	4	21	8	2	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	6	63.3	.....	98	30†	31	4	47	0.11	.....	0.11	0.0	1	...	.....	.....	.....	H. S. Green.
Fresno	Fresno	293	23	71.0	+ 2.6	110	31	41	5	42	T.	− 0.36	T.	0.0	0	22	7	2	w.	U. S. Weather Bureau.
Fruto	Glenn	624	21	70.2	+ 2.3	108	30	42	4	....	0.15	− 1.35	0.15	0.0	1	28	0	3	s.	Southern Pacific Co.
Galt	Sacramento	49	32	66.3	− 0.8	100	31	49	1†	....	0.00	− 1.06	0.00	0.0	0	22	9	0	w.	Do.
Georgetown	El Dorado	2,650	37	62.6	+ 0.2	99	30†	32	4	40	0.21	− 2.60	0.13	0.0	2	24	2	5	sw.	H. D. Jerrett.
Gilroy	Santa Clara	193	36	68.2	+ 5.7	107	30	45	5	....	0.00	− 0.73	0.00	0.0	0	30	0	1	se.	Southern Pacific Co.
Gold Run	Placer	3,222	11	63.7	+ 4.9	96	31	32	4	36	0.40	− 2.18	0.20	0.0	2	25	4	2	.....	Do.
Gonzales	Monterey	127	11	56.4	− 1.0	101	30	40	21	....	0.00	− 0.46	0.00	0.0	0	25	3	3	n.	Do.
Grass Valley	Nevada	2,690	38	62.2	.....	98	31	32	4	36	0.27	− 2.22	0.20	0.0	3	24	5	2	sw.	F. R. Hull.
Greenville	Plumas	3,600	16	57.2	+ 4.5	98	30	29	17	59	0.75	− 1.19	0.42	T.	4	23	3	5	sw.	C. H. Higbie.
Groveland	Tuolumne	2,328	1	61.7	.....	98	30†	33	4†	39	T.	.....	T	0.0	0	20	11	0	.....	H. S. Richardson.
Guinda	Yolo	350	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Hanford	Kings	249	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Healdsburg	Sonoma	110	17	65.6	+ 6.9	107	30	38	4	47	0.06	− 1.70	0.03	0.0	3	.....	.....	.....	.....	John Favour.
Hearst	Mendocino	1,800	...	60.1	.....	90	31	38	4	43	1.05	.....	0.50	0.0	5	20	6	5	.....	H. D. Ellmaker.
Heber	Imperial	− 20	4	81.8	.....	121	30	49	5	51	0.00	.....	0.00	0.0	0	31	0	0	w.	E. T. Chumard.
Hollister	San Benito	284	36	60.5	− 1.8	102	30	37	5	47	0.00	− 0.49	0.00	0.0	0	20	11	0	w.	J. N. Thompson.
Hornbrook	Siskiyou	2,154	22	55.7	− 5.6	88	16†	39	2	....	0.00	− 1.21	0.00	0.0	0	23	8	0	n.	Southern Pacific Co.
Hot Springs	Tulare	3,300	3	63.1	.....	100	31	36	4	39	0.14	.....	0.14	0.0	1	26	2	3	.....	U. S. Forest Service.
Hullville (near)	Lake	2,250	3	61.0	.....	97	30	34	5	48	0.44	.....	0.23	0.0	5	7	22	2	nw.	John Duggan.
Idyllwild	Riverside	5,250	9	57.8	.....	96	31	26	4	46	0.00	.....	0.00	0.0	0	25	5	1	sw.	Earl Powers.
Independence	Inyo	3,907	14	67.5	+ 3.0	102	31	33	5	40	0.00	− 0.29	0.00	0.0	0	21	9	1	nw.	U. S. Weather Bureau.
Indio	Riverside	− 20	32	84.6	+ 3.5	121	30	56	5	44	0.00	− 0.03	0.00	0.0	0	22	9	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	3	55.0	.....	90	30	32	4	40	1.50	.....	1.10	3.0	2	19	8	4	.....	Cal. Gas & Electric Co.
Ione	Amador	287	32	70.3	+ 5.3	105	30	49	4	....	0.31	− 0.91	0.31	0.0	1	27	0	4	sw.	Southern Pacific Co.
Iowa Hill	Placer	2,825	29	63.6	+ 3.8	98	30	32	4	36	0.17	− 2.84	0.10	0.0	2	24	3	4	sw.	C. F. Macy.
Jamestown	Tuolumne	1,471	7	63.7	.....	106	31	36	1†	56	0.05	.....	0.05	0.0	1	28	1	2	.....	Sierra Ry. of California.
King City	Monterey	333	23	62.0	+ 2.4	110	29	33	5†	60	0.00	− 0.29	0.00	0.0	0	31	0	0	.....	Southern Pacific Co.
La Porte	Plumas	5,000	16	56.0	+ 8.3	88	30	24	4	36	1.02	− 3.58	0.58	1.2	5	24	4	3	n.	C. W. Hendel.
Le Grand	Merced	255	10	68.6	+ 2.7	112	31	38	3	47	0.00	− 0.35	0.00	0.0	0	26	0	5	.....	Santa Fe Co.
Lemon Cove	Tulare	600	15	75.8	+ 6.8	118	31	42	4	53	0.05	− 1.24	0.05	0.0	1	30	1	0	w.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	21	57.0	+ 5.4	88	31	29	4	28	0.12	− 1.66	0.12	0.0	2	21	9	1	n.	The Director.
Livermore	Alameda	485	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. G. Still.
Lodi	San Joaquin	45	28	66.7	+ 3.3	104	31	41	5	44	0.02	− 1.34	0.02	0.0	1	26	5	0	w.	Esra Fiske.

TABLE 1.—*Climatological data for May, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
California—Cont'd.																				
Lone Pine	Inyo	2,728	5	68.7	.....	100	30†	33	3	53	0.00	.....	0.00	0.0	0	25	6	0	s.	G. F. Marsh.
Long Valley	Lassen	4,400	1	59.6[d]	.....	99[d]	30†	29[d]	4	51[d]	0.04	.....	0.03	0.0	2	13	15	3	sw.	A. G. Evans.
Los Angeles	Los Angeles	293	33	63.0	+ 2.5	83	28	49	6	27	0.00	− 0.43	0.00	0.0	0	17	12	2	sw.	U. S. Weather Bureau.
Los Banos	Merced	121	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Los Gatos	Santa Clara	600	23	60.8	+ 0.5	103	30	34	1	42	0.00	− 1.03	0.00	0.0	0	21	10	0	nw.	F. H. McCullagh.
Lytle Creek	San Bernardino	2,900	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Anderson.
Macdoel	Siskiyou	4,258	3	48.4	.....	93	30	17	2†	63	0.50	.....	0.19	0.0	4	11	13	7	nw.	Butte Valley L'd Co.
Madeline	Lassen	5,270	1	54.3	.....	93	31	23	2	59	0.28	.....	0.24	2.0	3	22	3	6	w.	J. H. Williams.
Magalia	Butte	2,321	6	63.1	.....	102	30	30	3	45	0.44	.....	0.22	0.0	2	25	1	5	se.	Butte County R. R. Co.
Mammoth Tank	Imperial	257	32	82.0	+ 1.6	119	30	55	20	45	0.00	− 0.02	0.00	0.0	0	31	0	0	w.	Southern Pacific Co.
Marysville	Yuba	67	39	68.6	− 0.2	105	29	41	4	39	0.00	− 0.87	0.00	0.0	0	28	0	3	s.	Do.
Mecca	Riverside	− 185	4	82.5	.....	116	30	52	4	43	0.00	.....	0.00	0.0	0	31	0	0	se.	A. Lunsted.
Menlo Park	San Mateo	64	32	64.8	+ 2.7	101	30	44	5	....	0.00	− 0.55	0.00	0.0	0	29	0	2	nw.	Southern Pacific Co.
Merced	Merced	173	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Mill Creek (1)	Amador	.....	3	58.4	.....	99	17	36	1†	52	0.25	.....	0.09	0.0	4	24	3	4	ne.	Cal. Gas & Electric Co.
Milton (near)	Calaveras	660	19	67.6	+ 3.0	105	30	43	1†	43	0.23	− 1.26	0.23	0.0	1	25	6	0	nw.	J. H. Southwick.
Modesto	Stanislaus	90	38	67.0	+ 2.4	100	30†	45	4	....	0.00	− 0.47	0.00	0.0	0	29	0	2	.....	Southern Pacific Co.
Mojave	Kern	2,751	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Mokelumne Hill	Calaveras	1,550	17	65.4	+ 6.9	101	30	38	4	34	0.19	− 1.50	0.10	0.0	3	10	16	5	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	4	60.2	.....	96	30	30	4†	41	0.00	.....	0.00	0.0	0	28	2	1	w.	H. Lathrop.
Montague	Siskiyou	2,450	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Chambers.
Monterey	Monterey	15	45	66.1	+ 7.8	82	20†	58	1†	....	0.00	− 0.49	0.00	0.0	0	31	0	0	ne.	Southern Pacific Co.
Monterio	Kern	4,500	11	61.4	+ 3.5	100	30†	34	3	40	0.05	− 1.57	0.05	0.0	1	26	3	2	nw.	John C. Knecht.
Monumental	Del Norte	.....	5	55.5	.....	93	30	32	2†	40	3.19	.....	0.80	2.0	8	21	8	2	.....	G. F. Morgan.
Mount Tamalpais	Marin	2,375	11	59.0	+ 5.3	92	30	37	3	29	0.23	− 0.69	0.20	0.0	3	15	12	4	nw.	U. S. Weather Bureau.
Napa City	Napa	20	33	61.4	+ 1.5	103	30	37	1†	51	0.05	− 0.86	0.03	0.0	2	21	7	3	s.	Thomas Hull.
Napa (S. H.)	....do	60	32	63.8	+ 3.9	104	30	41	1†	46	0.00	− 1.07	0.00	0.0	0	15	13	3	sw.	W. H. Martin.
Needles	San Bernardino	477	18	84.6	+ 4.4	118	29	55	7	44	0.00	− 0.11	0.00	0.0	0	31	0	0	w.	Santa Fe Co.
Nellie	San Diego	5,350	1	63.6	.....	94	31	32	4†	43	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	C. J. Bailey.
Nevada City	Nevada	2,580	18	61.6	+ 6.0	101	30	29	4	57	0.27	− 1.95	0.17	0.0	3	24	0	7	sw.	S. W. Marsh.
Newcastle	Placer	970	17	76.0	+11.3	114	30†	41	1†	49	0.16	− 1.50	0.12	0.0	2	26	4	1	s.	George D. Kellog.
Newhall	Los Angeles	1,200	33	67.9	+ 3.8	109	30†	50	4†	....	0.00	− 0.51	0.00	0.0	0	30	0	1	se.	Southern Pacific Co.
Newman	Stanislaus	91	21	73.0[d]	+ 2.3	106[d]	31	50[d]	31	56[d]	0.00	− 0.66	0.00	0.0	0	27	0	4	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	6	62.0	.....	97	30	32	4	44	0.51	.....	0.31	0.0	2	28	0	3	.....	Cal. Gas & Electric Co.
North Bloomfield	Nevada	3,200	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Shand.
North Fork	Madera	3,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Shinn.
Oakdale	Stanislaus	156	16	68.8	+ 3.9	108	31	49	5	...	0.06	− 0.80	0.06	0.0	1	24	5	2	nw.	Southern Pacific Co.
Oakland	Alameda	36	34	62.0	+ 3.9	93	30	38	4	35	0.02	− 0.93	0.01	0.0	2	18	9	4	w.	Chabot Observatory.
Oceanside	San Diego	.....	.....	66.6	.....	79	26	46	4	26	T.	.....	T.	0.0	0	2	27	2	w.	H. D. Brodie.
Ojai Valley	Ventura	900	4	62.8	.....	102	31	33	4	52	0.00	.....	0.00	0.0	0	26	4	1	sw.	W. H. Duncan.
Orland	Glenn	254	28	70.7[b]	+ 0.3	110[b]	30	38[b]	3	41[b]	0.17	− 0.81	0.11	0.0	2	27	4	0	n.	W. W. Patch.
Orleans	Humboldt	520	7	69.7	+ 5.3	109	31	44	5	52	0.08	.....	0.46	0.0	5	22	4	5	.....	Fred T. Hale.
Oroville (near)	Butte	250	26	70.9	+ 3.7	107	29†	41	5	42	T.	− 1.62	T.	0.0	0	28	1	2	s.	E. D. Fairchild.
Palermo	....do	213	19	68.6	+ 3.0	107	31	37	4	50	T.	− 1.46	T.	0.0	0	22	7	2	s.	Miss Hettie Boalt.
Palm Springs	Riverside	584	21	81.5	+ 0.4	118	29†	58	4	.....	0.00	− 0.02	0.00	0.0	0	19	11	1	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	20	65.4	+ 1.8	96	31	43	6	41	0.00	− 0.43	0.00	0.0	0	28	1	2	sw.	E. R. Sorver.
Paso Robles	San Luis Obispo	800	23	63.5	+ 1.6	110	31	30	4	58	0.00	− 0.55	0.00	0.0	0	29	2	0	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	14	60.6	+ 1.0	97	29†	35	5	53	0.15	− 1.78	0.14	0.0	2	24	4	3	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	3	64.6	.....	98	31	33	4	30	0.15	.....	0.10	0.0	2	24	6	1	.....	Tuolumne W. P. Co.
Placerville	El Dorado	1,875	21	.....	.....	.....	.....	.....	.....	.....	0.10	− 2.35	0.10	0.0	1	.....	.....	.....	.....	A. Baring-Gould.
Point Lobos	San Francisco	250	17	57.4	+ 3.5	86	30	47	4	28	0.04	− 0.76	0.02	0.0	2	11	10	10	nw.	John Hyslop.
Point Reyes	Marin	490	18	53.5	+ 1.9	75	30	45	3	27	0.06	− 1.48	0.06	0.0	2	11	8	12	nw.	U. S. Weather Bureau.
Porterville	Tulare	464	21	70.4	− 2.8	109	31	40	5	46	0.00	− 0.53	0.00	0.0	0	30	1	0	....	Harry E. Cowie.
Quincy	Plumas	3,400	15	57.0	+ 2.7	94	31	25	20	54	0.06	− 2.42	0.04	0.0	2	26	4	1	sw.	D. N. Rogers.
Red Bluff	Tehama	307	33	70.0	+ 3.5	106	30	43	3	36	0.74	− 0.59	0.65	0.0	3	22	5	4	se.	U. S. Weather Bureau.
Redding	Shasta	552	35	70.3	+ 3.1	104	30	44	4	35	0.68	− 1.51	0.27	0.0	4	21	7	3	n.	L. F. Bassett.
Redlands	San Bernardino	1,352	17	67.6	+ 1.8	105	31	40	5	44	0.00	− 0.76	0.00	0.0	0	19	8	4	w.	Paul W. Moore.
Reedley	Fresno	347	10	71.0	+ 0.2	112	31	40	5	45	0.00	− 0.73	0.00	0.0	0	31	0	0	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	4	66.7	.....	100	31	44	4	34	T.	.....	T.	0.0	0	24	3	4	sw.	So. California Edison Co.
Riverside	Riverside	851	28	67.0	+ 1.8	103	31	39	5	47	0.00	− 0.38	0.00	0.0	0	24	7	0	w.	C. W. Barton.
Rocklin	Placer	249	39	67.8	0.0	107	30	40	1†	45	0.28	− 0.75	0.28	0.0	1	24	0	7	se.	Southern Pacific Co.
Rohnerville	Humboldt	75	7	56.6	.....	85	16	38	15†	47	0.73	.....	0.31	0.0	3	15	11	5	n.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	33	65.8	+ 2.9	103	30	44	4	41	0.03	− 0.93	0.03	0.0	1	26	4	1	s.	U. S. Weather Bureau.
Sacramento (2)	....do	35	57	65.8	+ 1.6	100	30	42	5	40	0.08	− 0.76	0.08	0.0	1	26	5	0	s.	S. H. Gerrish.
St. Helena	Napa	255	2	63.8	.....	106	29	35	4	62	0.19	.....	0.19	0.0	1	17	0	14	....	B. F. Kettlewell.
Salinas	Monterey	40	36	62.1	+ 2.1	96	30	40	5†	46	0.00	− 0.49	0.00	0.0	0	29	2	0	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	18	68.1	+ 4.1	108	31	36	5	52	0.00	− 0.62	0.00	0.0	0	22	8	1	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	39	61.1	+ 0.3	75	9	46	5	20	0.05	− 0.32	0.05	0.0	2	16	15	0	w.	U. S. Weather Bureau.
San Francisco	San Francisco	207	39	58.7	+ 3.2	90	30	48	4	35	0.03	− 0.72	0.02	0.0	2	13	9	9	w.	Do.
San Jacinto	Riverside	1,550	17	68.9	+ 4.4	109	31	37	5	50	0.00	− 0.67	0.00	0.0	0	24	3	4	w.	E. T. Tanner.
San Jose	Santa Clara	95	35	62.3	+ 1.6	102	30	39	1	48	T.	− 0.57	T.	0.0	0	21	9	1	nw.	U. S. Weather Bureau
San Leandro	Alameda	48	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. B. Sanford.
San Luis Obispo	San Luis Obispo	201	15	60.5	+ 3.8	97	28	37	4	39	T.	− 0.32	T.	0.0	0	13	12	6	nw.	U. S. Weather Bureau.
San Mateo	San Mateo	22	36	67.3	+ 6.5	94	30	56	1†	..	0.00	− 0.55	0.00	0.0	0	28	3	0	nw.	Southern Pacific Co.
San Miguel	San Luis Obispo	616	23	71.5	+ 7.7	104	30	48	4	...	0.00	− 0.28	0.00	0.0	0	23	5	3	.....	Do.
San Miguel Island	Santa Barbara	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Capt. W. G. Waters.
Sanger	Fresno	371	21	73.1	+ 0.5	110	29	60	1†	...	0.00	− 0.48	0.00	0.0	0	31	0	0	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	26	60.0	+ 0.2	88	9	41	5	35	0.00	− 0.40	0.00	0.0	0	26	5	0	w.	George W. Russell.
Santa Clara	Santa Clara	90	21	62.5	+ 4.4	104	30	36	1	52	T.	− 0.62	T.	0.0	0	22	6	3	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	37	59.7	− 0.1	93	15	38	4	50	0.00	− 1.03	0.00	0.0	0	25	2	4	s.	W. R. Springer.
Santa Magarita	San Luis Obispo	996	21	61.8	+ 1.4	101	29	40	15†	...	0.00	− 0.89	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Santa Maria	Santa Barbara	220	22	64.6	+ 4.8	90	28	49	1†	26	0.00	− 0.51	0.00	0.0	0	21	6	4	w.	L. E. Blochman.
Santa Monica	Los Angeles	110	25	55.4	− 9.0	68	10†	41	4†	22	0.00	− 0.43	0.00	0.0	0	19	5	7	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	21	60.8	− 1.2	100	30	36	1†	48	0.08	− 1.70	0.06	0.0	2	19	9	3	sw.	M. L. McDonald, jr.
Selma	Fresno	311	24	73.8	+ 3.3	104	31	54	4†	....	0.00	− 0.39	0.00	0.0	0	29	2	0	nw.	Southern Pacific Co.
Shasta	Shasta	1,049	14	64.8	− 1.5	108	31	34	3	55	0.09	− 2.88	0.04	0.0	3	25	2	4	.....	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	13	65.6	+ 4.5	95	31	43	3	37	0.01	− 1.28	0.01	0.0	1	27	2	2	s.	Miss A. E. Carter.
Sierraville	Sierra	5,000	.....	54.4	.....	93	30	25	4	53	0.00	.....	0.00	0.0	0	15	10	6	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	21	55.4	+ 0.1	99	30	29	15	48	1.12	− 1.53	0.90	0.0	3	24	0	7	n.	Southern Pacific Co.
Soledad	Monterey	188	36	72.0	+ 9.7	95	24†	50	1	...	0.00	− 0.27	0.00	0.0	0	31	0	0	n.	Do.
Southeast Farallon	San Francisco	30	7	53.2	.....	63	16	45	17	18	0.09	.....	0.07	0.0	4	11	10	10	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	22	66.0	.....	102	30	38	5	44	0.04	− 1.82	0.04	0.0	1	25	3	3	w.	Charles P. Jones.
Stirling City	Butte	3,525	6	58.5	.....	101	30	29	4	38	0.65	.....	0.25	0.0	3	25	2	4	se.	Butte County R. R. Co.
Stockton (S. H.)	San Joaquin	23	39	65.4	+ 1.3	102	30	43	1	40	T.	− 0.67	T.	0.0	0	27	3	1	nw.	State Hospital.
Storey	Madera	296	10	64.6	− 0.7	110	31	36	5	64	0.00	− 0.64	0.00	0.0	0	30	0	1	nw.	Santa Fe Co.
Suisun	Solano	20	30	58.5[a]	− 5.3	82[a]	23	42[a]	20	....	0.02	− 0.81	0.02	0.0	1	26	2	3	.....	Southern Pacific Co.
Summerdale	Mariposa	5,270	14	56.2	+ 6.7	90	31	27	4	33	0.12	− 2.36	0.12	0.0	1	25	5	1	....	J. H. Lowry.

TABLE 1.—*Climatological data for May, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Summit	Placer	7,017	37	51.9	+ 9.3	85	31	20	4	39	0.53	− 1.61	0.40	4.0	2	28	1	2	w.	Southern Pacific Co.
Susanville	Lassen	4,175	21	58.6	+ 2.7	95	31	27	2	50	T.	− 1.75	T.	0.0	0	18	13	0	sw.	James Branham.
Tamarack	Alpine	8,000	4	41.4	.....	81	30	6	5	46	1.54	.....	1.28	14.0	2	22	7	2	sw.	William Bennett.
Tehachapi	Kern	3,964	33	74.9	+15.7	99	27	51	8	....	0.00	− 0.40	0.00	0.0	0	.....	.....	.....	.....	Southern Pacific Co.
Tehama	Tehama	220	39	82.1	+13.2	106	31	60	4	....	0.10	− 0.75	0.10	0.0	1	23	1	7	s.	Do.
Three Rivers	Tulare	870	....	68 0	.....	104	30†	39	5	43	0.08	.....	0.08	0.0	1	22	9	0	sw.	E. D. Barton.
Towle	Placer	3,704	24	58.8	+ 1.3	96	30	31	4†	39	0.50	− 2.36	0.23	0.0	3	28	0	3	n.	Southern Pacific Co.
Tracy	San Joaquin	64	30	70.1	+ 1.0	103	30	48	3	....	0.00	− 0.55	0.00	0.0	0	26	3	2	nw.	Do.
Ukiah	Mendocino	620	17	69.4	+ 9.0	104	30†	37	5	54	0.37	− 0.91	0.17	0.0	3	19	8	4	nw.	Dr. George McGowen.
Upland	San Bernardino	1,750	13	63.7	+ 4.0	98	31	37	5†	41	0.00	− 1.33	0.00	0.0	0	23	7	1	w.	A. P. Harwood.
Upper Lake	Lake	1,350	25	63.4	+ 3.6	102	30	38	5	47	0.16	− 1.09	0.12	0.0	3	28	0	3	nw.	C. M. Hammond.
Vacaville	Solano	175	22	66.0	+ 0.9	109	30	35	4†	53	0.03	− 1.41	0.03	0.0	1	23	8	0	sw.	G. O. Coburn.
Valley Springs	Calveras	673	21	69.8	+ 4.0	108	30	53	4	....	0.24	− 1.26	0.24	0.0	1	24	6	1	nw.	Southern Pacific Co.
Visalia	Tulare	334	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Warner Springs	San Diego	3,165	2	63.8	.....	100	31	33	4	42	0.00	.....	0.00	0.0	0	31	0	0	.....	Mrs. E. F. Sanford.
Wasco	Kern	336	10	68.8	+ 0.4	109	31	42	3	48	0.00	− 0.37	0.00	0.0	0	29	0	2	.....	Santa Fe Co.
Watsonville	Santa Cruz	23	14	62.8	+ 4.1	93	30	48	2	23	0.04	− 0.62	0.04	0.0	1	10	17	4	sw.	Spreckels Sugar Co.
Westley	Stanislaus	90	21	73.8	+ 3.2	105	30†	51	1	....	0.00	− 0.66	0.00	0.0	0	30	0	1	n.	Southern Pacific Co.
Wheatland	Yuba	84	23	67.6	+ 3.2	102	31	40	5	44	0.09	− 1.41	0.08	0.0	2	22	4	5	s.	Wm. Lumbard.
Willows	Glenn	136	31	68.5	0.0	104	30	37	4	39	0.09	− 0.63	0.08	0.0	2	22	3	6	s.	M. T. Harrington, jr.
Yosemite	Mariposa	3,945	6	59.4	.....	97	30	27	5	54	0.55	.....	0.19	0.5	5	24	6	1	sw.	C. W. Tucker.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
• Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1910. District No. 11, California.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																																	
Klamath Agency	Klamath																																
Klamath Falls	do		.04	.45	.22	.04				.04	.10															.08							0.97
Lakeview	Pitt																									.10	T.						0.10
Long Valley	do																																
Merrill	Interior Drainage			.06																						.01							0.07
Yonna	do		.05	.38						.10															.15								0.68
California.																																	
Aguanga	Coast																																0.00
Alameda	do			T.					T.															T.									T
Alturas	Sacramento	.03		.18	.03					.11	.05													.06		.17							0.63
Anderson	do																																
Angles Camp	San Joaquin										.05																						0.05
Angiola	do																																0.00
Antioch	do																																0.00
Aptos	Coast																																0.00
Arrowhead Springs	do																																0.00
Auburn	Sacramento										.12																						0.12
Avalon	Ocean																																0.00
Azusa	Coast																																0.00
Bagdad	Desert																																0.00
Bakersfield	San Joaquin																																0.00
Barstow	Desert																																0.00
Bear River	San Joaquin																																
Bear Valley (1)	Sacramento		.20	.26						.28																							0.74
Bear Valley (2)	San Joaquin																																
Bear Valley Dam	Coast																																0.00
Ben Lomond	do																																0.00
Berkeley	do									.01																T.							0.01
Big Bar	Sacramento																																
Biggs	do				.30																												0.30
Bishop	Owens																																
Bishop Creek	do				.10										T.																		0.10
Blocksburg	Coast																																
Blue Canyon	Sacramento			.40						.20																							0.60
Blythe	Desert																																0.00
Boulder Creek	Coast																																0.00
Bowmans Dam	Sacramento																																
Branscomb	Coast		T.	.50						.18	.05																						0.76
Brawley	Desert																																
Brush Creek	Sacramento																																
Burney	do																																
Butte Creek House	do																																
Butte Valley	do			.67	.04					.25																							0.96
Calexico	Desert																																0.00
Caliente	San Joaquin																																0.00
Calistoga	Coast																																0.15
Campbell	do										.15																						0.00
Campo	do																																0.00
Camptonville (near)	Sacramento	.17		.09	.21					.33																							0.80
Cedarville	Mountain Lakes		.02	.18						.07																							0.27
Chester	Sacramento																																
Chico	do		T.	T.						.06																							0.06
Chico (near)	do			T.						.07																							0.07
China Flat	Coast		T.	.39						.16																	T.						0.55
Chino	do																																0.00
Cisco	Sacramento			.10	.20						T.																						0.30
Claremont	Coast																																0.00
Clear Lake	Klamath																																
Cloverdale	Coast										.21																						0.21
Colfax	Sacramento				.20						.35																						0.55
Colgate	do	.25			.32						.22																						0.79
Colusa	do									.06																							0.06
Corning	do																																0.00
Corona	Coast																																0.00
Crockers	San Joaquin																																
Cuyamaca	Coast																																0.00
Daunt	San Joaquin																																0.00
Davisville	Sacramento				.01					.01																							0.02
Deer Creek	do			.09	T.					.25																							0.34
Delta	do																																0.00
Denair	San Joaquin			.01																													0.01
Descanso	Coast																																0.00
Dinuba	San Joaquin																																0.00
Dobbins	Sacramento			.02	.32					.22																							0.56
Dorris	Klamath																																
Downieville	Sacramento	.16		.24	.06					.35	.34																						1.15
Dudleys	San Joaquin			T.	T.					.13																							0.13
Dunnigan	Sacramento										.01																						0.01
Dunsmuir	do			.23	.09						.98	.03																					1.33
Durham	do		T.	.03							.10																						0.13
Dyerville	Coast										.33															.05							0.38
Edgewood	Klamath			1.12						.26																.08		.02					1.48
Edison	San Joaquin																																
El Cajon	Coast																																0.00
Electra	San Joaquin			.06						.03																							0.09
Elsinore	Coast																																0.00
Emigrant Gap	Sacramento		.10	T.	T.					.35																							0.45
Escondido	Coast																																0.00
Eureka	do			.08	.08					.08	.07															.05	.01	.27					0.64
Fairmont	do																																0.00
Farmington	San Joaquin				.02					.03																							0.05
Felton	Coast																																0.00
Firebaugh	San Joaquin																																0.00
Folsom	Sacramento	T.			.08					.02																							0.10
Fordyce Dam	do	T.	T.	.40	.05					.35	.12																						0.92
Fort Bragg	Coast		.45																														0.45
Fort Ross	do			.05						.07	.11																						0.23
Fouts Springs	Sacramento			.11					T.																								0.11
Fredalba	Coast																																0.00
Fresno	San Joaquin			T.						T.																							T.
Fruto	Sacramento				T.						.15																						0.15
Galt	San Joaquin																																0.00
Georgetown	do			T.	.13						.08																						0.21
Gilroy	Coast																																0.00

TABLE 2.—*Daily precipitation for May, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
California—Cont'd.																																	
Gilta	Coast		.05	.39	.02					.26	.01															.28	.04	.06					1.11
Glendora	...do																																0.00
Glen Ranch	...do																																0.00
Glennville	San Joaquin																																
Glenwood	Coast					T.																											T.
Gold Run	Sacramento	.20			T.						.20																						0.40
Gonzales	Coast																																0.00
Grass Valley	Sacramento			.06	.01					.20																							0.27
Greenville	...do			.42	.06					.23	.04																						0.75
Gridley	...do									.12																							0.12
Groveland	San Joaquin			T.	T.					T.																							T.
Guinda	Sacramento																																
Hanford	San Joaquin				.05																												0.05
Head Dam	Sacramento				.54					.30																							0.84
Healdsburg	Coast	.02		T.						.01	.03																						0.06
Hearst	...do		.20	.50					.10	.20																.05							1.05
Heber	Desert																																0.00
Helen Mine	Coast										.29																						0.29
Hesperia	Desert																																0.00
Holcomb	Coast																																0.00
Hollister	...do																																0.00
Hornbrook	...do																																0.00
Hot Springs	San Joaquin				.14																												0.14
Hullville	Coast	.04		.23	.05					.02	.10																						0.44
Idyllwild	...do																																0.00
Independence	Owens																																0.00
Indio	Desert																																0.00
Inskip	Sacramento		T.	1.10	T.					.40																							1.50
Ione	San Joaquin			.31																													0.31
Iowa Hill	Sacramento				.07					.10																							0.17
Isabella	San Joaquin			T.																													T.
Jacksonville	...do				.06																												0.06
Jamestown	...do				.05																												0.05
Jenny Lind	...do				.22																												0.22
Johnsville	Mountain Lakes																																
Jolon	Coast																																0.00
Julian	...do																																
Kennedy Mine	San Joaquin																																\$0.23
Kennett	Sacramento			.10							.94																						1.04
Kentfield	Coast																																0.00
Kernville	San Joaquin																																0.00
King City	Coast																																0.00
Knights Landing	Sacramento				T.						.04																						0.04
Knob	...do				T.				.13																								0.13
La Grange	San Joaquin																																
Lake Eleanor	...do																																
Lakeside	Coast																																
La Porte	Sacramento	.01		.58	.04					.36	.03																						1.02
Lathrop	San Joaquin										T.																						T.
Laurel	Coast																																0.00
Laytonville	...do			.34						.30																							0.64
Le Grand	San Joaquin																																0.00
Lemon Cove	...do			.05																													0.05
Letter Box	Sacramento																																
Lick Observatory	Coast										.12																						0.12
Livermore	...do																																
Lodi	San Joaquin									.02																							0.02
Lone Pine	Owens																																0.00
Long Camp	San Joaquin			.29						.18																							0.47
Long Valley	Mountain Lakes			.01						.03																							0.04
Lordsburg	Coast																																0.00
Los Alamos	...do																																0.00
Los Angeles	...do																																0.00
Los Banos	San Joaquin																																
Los Burros Mine	Coast																																
Los Gatos	...do																																0.00
Los Vaqueros	...do																																
Lowe Observatory	...do	.02																															0.02
Lytle Creek	...do																																0.00
McCloud	Sacramento																																
Macdoel	Klamath			.10	.02					T.	.19														.19								0.50
Madeline	Mountain Lakes		T.	.24	.01					.03																							0.28
Magalia	Sacramento		.22							.22																							0.44
Mammoth Tank	Desert																																0.00
Mariposa	San Joaquin										.06																						0.06
Marysville	Sacramento																																0.00
Mecca	Desert																																0.00
Melones	San Joaquin				.10						.12																						0.22
Menlo Park	Coast																																0.00
Merced	San Joaquin																																
Merced Falls	...do																																0.00
Mesa Grande	Coast			.07																													0.07
Mill Creek (1)	San Joaquin			.04	.08					.09	.04																						0.25
Mill Creek (2)	Coast																																0.00
Mills College	...do			.01																							.03						0.04
Milo	San Joaquin																																0.00
Milton (near)	...do				.23					T.																							0.23
Modesto	...do																																0.00
Mojave	Desert																																
Mokelumne Hill	San Joaquin			.10	.03					.06																							0.19
Mono Ranch	Coast																																0.00
Montague	Klamath																																
Monterey	Coast																																0.00
Monterio	San Joaquin				.05																												0.05
Montgomery Creek	Sacramento																																
Monumental	Coast	.40	.80							.67	.10														.58	.18	.35	.11					3.19
Morena Dam	...do																																
Mount Tamalpais	...do			.03						.05	.15																						0.23
Mount St. Helena	...do								.20			.50																					0.70
Napa City	...do			.02						T.	.03																						0.05
Napa (S. H.)	...do																																0.00
Needles	Desert																																0.00
Nellie	Coast																																0.00
Nevada City	Sacramento			.07	.03					.17																							0.27

TABLE 2.—*Daily precipitation for May, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Newcastle	Sacramento				.04					.12																						0.16
Newhall	Coast																																0.00
Newman	San Joaquin																																0.00
Nimshew	Sacramento	T.		.20	T.					.31																							0.51
North Bloomfield	do																																
North Fork	San Joaquin																																
North Lakeport	Coast																																0.00
Oakdale	San Joaquin				.06																												0.06
Oak Grove	Coast																																0.00
Oakland	do			.01						.01	T.																						0.02
Oakville	do																																0.00
Oceanside	do		T.																														T.
Oisi Valley	do																																0.00
Orland	Sacramento			.06					T.	.11																							0.17
Orleans	Klamath		.46	.05						.22															.20		.05						0.98
Oroville	Sacramento			T.																													T.
Ozena	Coast																																0.00
Palermo	Sacramento		T.							T.																							T.
Palm Springs	Desert																																0.00
Parkfield	Coast																																
Pasadena	do																																0.00
Paso Robles	do																																0.00
Peachland	do	T.		T.						.01	.14																						0.15
Penstock Camp	San Joaquin			.05						.10																							0.15
Peyton	Sacramento																																
Phoenix Dam	San Joaquin			.11						.07																							0.18
Pilot Creek	Sacramento			.20	.15				.15																								0.50
Pine Crest	Coast																																0.00
Pittville	Sacramento			.50																													0.50
Placerville	do										.10																						0.10
Point Lobos	Coast									T.	.02														.02								0.04
Point Loma	do																														.01	.01	0.02
Point Reyes	do			T.						.01	.05																						0.06
Pollasky	San Joaquin																																0.00
Porterville	do																																0.00
Priest Valley	Coast																																0.00
Quincy	Sacramento		T.	.04						.02																							0.06
Red Bluff	do		.33	.27						.09																							0.74
Redding	do		.27	.15						.20	.06																						0.68
Redlands	Coast																																0.00
Reedley	San Joaquin																																0.00
Represa	Sacramento				.07																												0.07
Rialto (near)	Coast	T.																															T.
Rio Vista	Sacramento									T.	.04																						0.04
Riverside	Coast																																0.00
Rocklin	Sacramento				.28						T.																						0.28
Rohnerville	Coast			.31						T.																	.20	.22					0.73
Round Valley	Owens																																
Sacramento (1)	Sacramento									.03																							0.03
Sacramento (2)	do			T.						.08																							0.08
Saint Helena	Coast										.19																						0.19
Salinas	do																																0.00
San Bernardino	do																																0.00
San Diego	do	.03	.02																														0.05
San Francisco	do			T.						T.	.02														.01	T.							0.03
San Jacinto	do																																0.00
San Jose	do			T.																													T.
San Leandro	do																																
San Luis Obispo	do										T.																						T.
San Mateo	do																																0.00
San Miguel	do																																0.00
San Miguel Island	Ocean																																
Sanger	San Joaquin																																0.00
Santa Ana River	Coast	.03																															0.03
Santa Barbara	do																																0.00
Santa Clara	do			T.																													T.
Santa Cruz	do																																0.00
Santa Margarita	do																																0.00
Santa Maria	do																																0.00
Santa Monica	do																																0.00
Santa Rosa	do									.06	.02																						0.08
Sausalito	do																																10.04
Selma	San Joaquin																																0.00
Seven Oaks	Coast																																
Shasta	Sacramento		T.	T.	.03	.02				T.	T.																.04						0.09
Shingle Springs	San Joaquin																																0.00
Sierra Madre	Coast	.01																															0.01
Sierraville	Mountain Lakes																																0.00
Sisquoc Ranch	Coast																																0.00
Sisson	Sacramento		.12	.10						.90															T.								1.12
Soledad	Coast																																0.00
Sonora	San Joaquin			.04						T.																							0.04
Southeast Farallon	Ocean									.04	.03														.01	.01							0.09
Spreckels	Coast																																0.00
Squirrel Inn	do																																
Stirling City	Sacramento		.20	.25							.20																						0.65
Stockton (S. H.)	San Joaquin									T.																							T.
Storey	do																																0.00
Suisun	Sacramento									.02																							0.02
Summerdale	San Joaquin									.12																							0.12
Summit (1)	Sacramento			.40							.13																						0.53
Summit (2)	Coast																																0.00
Surrey	do																				T.												T.
Susanville	Mountain Lakes									T.																							T.
Tamarack	Sacramento			1.23						.26																							1.54
Tehachipi	San Joaquin																																0.00
Tehama	Sacramento			.10						T.																							0.10
Three Rivers	San Joaquin				.08																												0.08
Towle	Sacramento	.23			.17						.10																						0.50
Tracy	San Joaquin																																0.00
Tulare	do		.12							T.																							0.12
Tustin (near)	Coast																																0.00
Ukiah	do			.17						.10	.10	T.																					0.37
Upland	do																																0.00

TABLE 2—*Daily precipitation for May, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
California—Cont'd.																																	
Upper Lake	Coast			.12						.03	.01																						0.16
Upper Matole	....do			.45	.01						.95	.02														.04		.01					1.48
Vacaville	Sacramento			T.						.03																							0.03
Valley Springs	San Joaquin				.24																												0.24
Ventura	Coast																																
Visalia	San Joaquin																																
Warner Springs	Coast																																0.00
Wasco	San Joaquin																																0.00
Watsonville	Coast																	.04															0.04
Weaverville	Sacramento																																
Weitchpec	Klamath																																
West Branch	Sacramento	.13		.75	.03					.37	.03																						1.31
Westley	San Joaquin																																0.00
West Point	....do						.02				.13																						0.15
West Saticoy	Coast																																0.00
Wheatland	Sacramento				.01					.08																							0.09
Willows	....do			.01						.08																							0.09
Woodleaf	....do																																
Yosemite	San Joaquin			.08	.14					.19	.08			.06																			0.55
Yucaipa	Coast																																

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1910. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																											
			Alturas.		Bantow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	70	30	60	31	79	51	60	35	.....	.....	73	59	55	45	74	45	70	43	64	52	56	38	67	32	75	47	76	50		
2...	72	32	64	26	82	46	59	35	.....	.....	75	52	55	46	77	46	74	48	67	51	57	41	69	35	77	43	72	49		
3...	75	30	51	29	77	53	48	34	.....	.....	67	52	55	44	70	48	69	44	64	49	46	37	53	35	73	45	57	43		
4...	74	29	49	30	69	50	57	31	.....	.....	65	48	56	46	68	43	63	36	65	49	51	38	56	29	67	45	60	43		
5...	69	25	64	36	80	35	68	34	.....	.....	72	52	58	46	79	41	72	33	70	49	62	40	72	30	80	40	72	41		
6...	75	30	78	30	88	45	74	39	95	51	81	51	65	46	88	48	80	40	75	49	69	52	80	39	88	45	84	50		
7...	74	29	81	33	95	53	80	42	100	60	86	56	56	48	90	56	85	51	77	53	74	58	88	40	81	53	90	54		
8...	65	27	83	36	99	54	79	44	103	60	83	63	57	51	92	57	86	54	77	54	69	57	84	44	95	59	88	58		
9...	74	29	79	37	91	56	66	46	103	64	83	59	70	51	84	58	83	50	76	54	60	49	72	51	89	55	71	57		
10...	76	30	62	38	88	59	59	45	97	73	73	55	59	53	82	54	82	52	76	56	57	46	71	40	82	53	72	56		
11...	77	35	73	28	93	50	67	31	98	62	83	58	58	52	83	49	84	54	72	53	66	48	80	35	85	48	84	53		
12...	72	20	80	31	93	54	69	39	101	60	86	62	56	50	89	58	87	58	72	54	70	54	84	42	87	54	90	57		
13...	55	29	76	34	95	55	71	36	102	70	89	55	56	51	83	53	85	58	71	52	68	55	84	40	86	53	88	59		
14...	65	29	74	35	96	60	79	45	103	66	89	60	54	46	91	56	85	54	71	55	77	56	88	42	91	45	87	67		
15...	60	30	69	30	96	57	81	55	102	63	87	74	55	46	92	58	81	65	72	56	80	60	89	42	94	60	78	65		
16...	80	30	72	37	79	60	81	59	90	66	87	65	74	46	91	55	72	41	79	56	74	57	81	54	92	57	87	61		
17...	75	32	80	25	86	43	83	59	94	59	89	65	72	48	93	58	78	43	72	57	73	62	89	46	93	56	91	59		
18...	74	29	78	35	90	47	75	45	98	65	87	60	53	48	92	57	80	46	69	53	66	48	86	43	92	55	88	56		
19...	65	25	74	35	91	57	75	38	97	63	81	56	54	47	86	51	82	51	66	53	58	42	80	41	87	52	81	55		
20...	60	23	78	45	86	57	79	39	89	56	86	55	55	48	81	52	82	53	62	53	45	41	73	40	81	50	76	52		
21...	72	29	82	34	91	50	78	40	92	55	76	54	55	49	82	50	84	50	68	54	54	41	77	38	84	48	81	52		
22...	70	30	86	35	95	48	79	40	98	58	82	62	53	49	87	52	87	51	73	52	69	51	85	38	87	52	87	55		
23...	69	27	89	37	99	58	80	40	103	60	87	66	56	49	95	58	88	53	70	51	73	44	90	48	96	57	90	61		
24...	65	25	76	40	98	59	61	43	103	66	81	56	63	50	83	54	87	56	69	54	58	42	75	46	80	54	76	54		
25...	64	29	66	43	90	62	70	43	98	67	79	61	61	50	82	57	86	62	71	53	59	47	75	46	84	52	81	59		
26...	61	20	77	40	98	59	75	44	104	60	82	60	66	49	88	53	90	55	75	55	64	49	85	40	86	51	83	55		
27...	59	27	72	50	103	59	76	42	105	64	84	65	57	47	91	61	93	57	76	56	69	51	87	50	92	54	84	66		
28...	57	20	83	32	103	63	82	44	106	62	92	66	68	43	96	55	94	62	83	57	79	58	99	42	101	55	92	60		
29...	73	40	91	36	107	62	91	46	112	67	101	80	66	49	104	64	98	60	83	56	87	68	96	46	103	59	100	65		
30...	80	55	98	37	111	62	97	50	118	75	101	75	61	50	109	67	101	63	80	55	92	79	101	52	106	67	106	71		
31...	85	59	98	44	111	66	95	50	.....	.....	101	71	60	51	110	72	102	64	82	55	91	75	100	53	109	72	105	71		
Mns	70.0	31.1	75.7	35.1	92.2	54.5	74.0	42.4	100.4	62.9	83.5	60.4	59.3	48.2	87.5	54.4	83.5	51.5	72.5	53.4	66.9	51.1	81.2	41.9	87.8	53.1	83.1	56.9		

Date.	California.																													
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	66	52	69	44	60	56	59	48	63	39	59	41	69	49	66	36	60	30	59	43	50	30	63	34	68	30		
2.....	73	62	68	47	63	56	57	49	67	44	66	41	67	43	67	40	58	31	60	46	50	28	65	27	69	32		
3.....	68	52	59	49	62	55	56	50	60	45	58	43	68	45	62	46	43	33	58	50	48	28	54	34	69	33		
4.....	68	45	62	44	61	50	59	48	64	40	60	37	65	45	64	39	48	36	58	44	40	20	49	28	63	30		
5.....	81	40	71	44	65	46	69	49	76	40	69	37	67	41	73	36	62	38	66	43	45	28	65	35	69	27		
6.....	88	47	82	49	67	52	66	51	75	43	68	41	75	42	74	39	75	39	78	50	55	34	77	35	74	33		
7.....	88	48	84	51	68	54	68	51	81	45	84	47	76	49	78	39	80	41	84	52	68	36	81	42	80	35		
8.....	82	52	78	51	72	54	61	50	74	47	75	48	75	54	70	45	78	50	83	52	70	46	83	47	77	40		
9.....	83	53	71	56	75	55	68	51	77	53	78	48	88	53	70	48	70	41	78	58	73	38	68	51	75	42		
10.....	82	54	71	53	72	58	63	54	70	49	70	52	83	30	68	53	52	35	76	52	65	35	66	43	73	38		
11.....	88	49	81	48	68	55	69	51	74	47	76	50	73	50	78	40	70	36	78	47	65	30	74	34	76	36		
12.....	88	49	83	51	65	58	64	50	74	45	75	47	71	48	79	40	72	38	83	52	72	38	80	41	81	37		
13.....	82	54	84	52	65	57	66	50	71	45	69	42	64	50	83	42	72	38	80	53	68	37	80	43	78	39		
14.....	80	51	86	55	65	58	70	51	83	44	72	40	65	47	88	45	71	37	90	56	69	38	78	44	84	39		
15.....	84	50	81	68	63	58	87	55	91	49	85	46	65	50	93	46	74	29	88	58	68	39	68	41	82	41		
16.....	90	52	87	62	65	59	75	54	86	56	72	50	70	53	87	67	72	36	89	56	55	29	67	40	80	45		
17.....	84	50	90	56	67	50	63	51	80	49	67	48	70	55	80	42	73	35	89	55	67	36	78	33	80	37		
18.....	82	49	75	51	66	57	57	51	70	55	67	51	64	50	65	50	76	38	74	52	69	38	77	44	82	42		
19.....	77	45	74	50	63	58	59	52	71	53	62	51	68	47	66	50	77	37	67	49	65	36	75	43	80	42		
20.....	65	49	67	50	62	57	57	51	71	52	62	52	62	45	61	49	71	38	68	46	65	39	79	43	82	40		
21.....	76	53	69	48	63	56	57	50	65	52	63	51	67	45	66	48	78	41	68	46	70	37	82	45	86	39		
22.....	84	53	81	49	67	58	63	51	74	52	80	50	68	46	76	41	81	43	82	49	72	41	84	46	85	40		
23.....	87	48	84	52	65	59	61	49	74	52	68	49	64	53	77	49	78	42	85	53	76	47	86	45	90	38		
24.....	84	49	72	50	65	58	60	50	69	54	63	50	66	54	66	50	78	38	70	50	70	47	76	51	89	39		
25.....	78	51	76	55	64	57	60	54	73	55	67	48	68	51	72	53	78	39	68	57	64	39	73	47	88	37		
26.....	91	49	83	52	66	57	64	54	75	55	81	51	71	52	75	47	68	36	80	51	70	35	79	43	90	39		
27.....	97	54	81	56	69	56	64	53	76	49	86	56	75	53	78	49	78	38	82	54	69	45	74	51	91	40		
28.....	99	57	89	55	66	56	76	53	84	45	97	60	78	54	91	43	79	37	93	56	77	38	83	40	90	41		
29.....	100	57	97	61	68	56	88	58	94	50	95	61	78	52	98	50	80	40	100	60	78	46	91	41	96	42		
30.....	101	58	103	62	70	56	90	55	102	54	84	54	72	54	100	52	99	51	102	66	81	50	94	48	97	43		
31.....	105	61	100	67	69	56	68	53	90	53	80	52	76	55	87	46	90	48	100	66	85	51	95	50	94	40		
Means.....	83.9	51.4	79.3	52.8	66.1	56.1	69.5	51.5	75.9	48.7	72.8	48.2	70.6	49.5	76.1	45.6	72.5	38.4	78.6	52.3	66.4	37.4	75.6	41.6	81.0	37.9		